

REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested. Upon entry of this amendment, the specification is amended, claims 1, 2, 4 and 7 are amended, and claims 3, 6, 9 and 10 are cancelled, leaving claims 1, 2, 4, 5, 7, 8, 11 and 12 pending with claims 1 and 2 being independent. No new matter has been added.

Objection to the Drawings

The Examiner states that Figures 1B, 9 and 10 should be designated by a legend such as --Prior Art--, because only that which is old is illustrated.

Applicants restfully disagree and submit that Figures 1B, 9 and 10 are not prior art. Rather, each of these figures is a comparative example devised by the inventors during the development of the present invention. Moreover, there is no discussion of these figures in the Background Art section, nor do the Applicants refer to these figures as prior art anywhere in the specification. Therefore, Applicants respectfully submit that these figures are not prior art, and respectfully request that this objection be withdrawn.

Additionally, the drawings are objected to because the Examiner contends that Figures 3 and 7 contradict each other. That is, the Examiner states that Figures 3 and 7 are supposed to show the claimed invention, but in Figure 3 the shaft 2 is attached to the inner joint part 20 in a manner consistent with the comparative example of figure 9, not figure 7.

Applicants respectfully disagree and submit that the Examiner's position is erroneous. Fig. 3 is a longitudinal sectional view showing the joint in a state where the inner and outer joint members are coaxial, i.e. the angle θ being 0. However, Fig. 6 shows the joint at a bending angle θ and, therefore, Fig. 6 is consistent with Fig. 7. Applicants submit that the figures and specification are clear regarding this description and therefore respectfully request that this objection be withdrawn.

Specification

The Examiner states that sentence that bridges pages 10 and 11 is nonsensical. This sentence has been amended to overcome this objection.

The Examiner states that the allegations made at page 11, lines 12+ are not backed up by

the drawings. In particular, the Examiner states that the description of this portion alleges that Figure 8 clearly shows a small hysteresis, and Figure 10 clearly shows a large hysteresis, but there is barely any difference between the drawings.

Applicants respectfully disagree. Figs. 8 and 10 clearly illustrate a difference in magnitude of hysteresis. Moreover, the term “large” is a relative term, and merely because the Examiner does not believe that the figures illustrate a “large” hysteresis, Applicants submit that one of ordinary skill in the art would understand based on the drawings and specification that the difference in hysteresis in Figs. 8 and 10 is “large”. Therefore, Applicants respectfully request that this objection be withdrawn.

Rejections Under 35 U.S.C. §112, first paragraph

Claims 4 and 11 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner states that there is no support for the limitation that the inner joint member is pushed out to the expanded side. The Examiner states that the application, as originally filed, discloses the inner joint member 20 being pushed to the opening side, but the expanded side is disclosed as being at the innermost or opposite side.

Applicants respectfully disagree and submit that the Examiner appears to confuse the ball tracks with the ball grooves. Please note the limitation in claim 4 that reads "the ball tracks include an expanded side ... such that the inner joint member is pushed out to the expanded side" is supported by the specification on pages 8, lines 16 to 19, which states that "a ball track defined by a pair of ball grooves 14, 24 take a wedge shape contracting from the opening side to the innermost side of the outer joint member 10." Moreover, the paragraph on page 10 (not page 9), lines 3 to 5 states "the ball grooves 24 of the inner ring 20...". Therefore, Applicants submit that there is support for this limitation and respectfully request that this rejection be withdrawn.

Applicants note that there was a typographical error on page 5, line 5, and on page 10, line 4. In each of these lines, the term "spread" or “expand” has been amended to "contract".

Rejections Under 35 U.S.C. §112, second paragraph

Claims 1-12 have been rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particular point out and distinctly claim the subject matter which

applicant regards as the invention. In particular, the Examiner states that claim 1 recites the limitation, “a torsional angle”, but does not recite where in relation to the previously recited claim elements the angle is measured. Additionally, the Examiner states that claims 1 and 2 recite the limitation, “input torque”, but do not recite where in relations to the previously recited claim elements the torque is applied. Lastly, the Examiner states that claim 2 recites the limitation, “a torsional rigidity”, but does not recite where in relation to the previously recited claim elements the rigidity is produced.

Applicants respectfully disagree and submit that one of ordinary skill in the art would understand these terms. In particular, each of the terms torsional angle, torque, and rigidity of the constant velocity joint is well known to a person skilled in the art. In the case of the constant velocity joint for use in a steering device, the input torque refers to the torque applied by the steering shaft to the inner joint member. The torsional angle means an angular displacement of the constant velocity joint under the input torque. The rigidity means the torsional rigidity of the constant velocity joint. *See* page 12 of the original specification for a further discussion.

Therefore, Applicants respectfully request that this rejection be withdrawn.

Rejections Under 35 U.S.C. §102(b)

Claims 1, 3-5, 9 and 11 have been rejected under 35 U.S.C. § 102(b) as being anticipated by allegedly admitted Prior Art.

Applicants submit that, as discussed above, Figures 1B, 9 and 10 are not prior art, and therefore respectfully request that this rejection be withdrawn.

Rejections Under 35 U.S.C. §103(a)

Claims 1-12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over over Yamazaki et al, (US 2003/0083135).

Applicants submit that the claims as now pending are allowable over the cited prior art. Specifically, amended independent claim 1 recites a fixed type constant velocity joint comprising a pressing section which axially applies an elastic pressing force disposed on an inner joint member side, and a cage including a receiving section which receives a pressing force from the pressing section, wherein the constant velocity joint is configured to be connected to a shaft of a vehicle and configured such that a rotational direction phase having a bending direction of the

shaft so as to be aligned with one ball groove of a ball grooves coincides with a steering wheel rotational phase of the vehicle in which the vehicle is in a straight travel state.

The cited prior art fails to disclose or render obvious such a joint. In particular, Yamazaki discloses a fixed constant velocity joint including a pressing member attached to a shaft, and a receiving member attached to a cage. An elastic force of an elastic member allows a pressing part of the pressing member to contact a receiving part of the receiving member. However, Yamazaki clearly fails to disclose a constant velocity joint that is configured such that a rotational direction phase having a bending direction of the shaft so as to be aligned with one ball groove of a ball grooves coincides with a steering wheel rotational phase of the vehicle in which the vehicle is in a straight travel state, as recited in claim 1.

Additionally, there is no reasoning in the prior art to modify Yamazaki such that it would have rendered claim 1 obvious. Therefore, Applicants submit that independent claim 1 and its dependent claims are allowable over the cited prior art.

Claim 2 and its dependent claims are allowable for similar reasons. That is, claim 2 recites a fixed type constant velocity joint configured to be connected to a shaft of a vehicle and configured such that a rotational direction phase having a bending direction of the shaft so as to be aligned with one ball groove of the ball grooves coincides with a steering wheel rotational phase of the vehicle such that the vehicle is in a straight travel state.

Such a joint is neither disclosed nor rendered obvious by the cited prior art.

Conclusion

In view of the foregoing amendments and remarks, all of the claims now pending in this application are believed to be in condition for allowance. Reconsideration and favorable action are respectfully solicited.

Should the Examiner believe there are any remaining issues that must be resolved before this application can be allowed, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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/Jeffrey J. Howell/

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January 12, 2010